BUILDING CODE OF AUSTRALIA
Audit Report

126 Watt Road, MORNINGTON

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EXECUTIVE SUMMARY

This report provides a BCA compliance review of the United Energy Mornington Site. The report nominates relevant BCA prescriptive or 'deemed to satisfy' compliance provisions and possible areas in which alternate performance based design solutions can be adopted where compliance with the nominated prescriptive provisions may not be practically achievable.

INTRODUCTION

This report has been prepared as a review of the existing conditions in relation to their compliance with the current Deemed-To-Satisfy provisions of the Building Code of Australia 2016 (Amendment 1).

The following BCA report has been prepared on the basis of on-site visual site inspections undertaken on the 24 February 2019 and a review of documentation outlined in appendix A of this report.

126 Watt Road, Mornington (the property) is occupied by United Energy. The building was built between 1950 and 1960, and has under gone minor upgrades and refurbishment works in 2004 as well as additional offices spaces / portables being added.

The industrial site is approximately 24,217 sqm which contains an office buildings and additional portable office sites as well as multiple large warehouses and an outdoor carpark at the front of the site. All buildings are single storey.

This report is based upon preliminary site audit. Design drawings have not been provided.

The report provides a general overview of key BCA and building regulatory matters, and considers that the building was built and approved in accordance with the applicable codes and standards at the time of construction. .

The main passive and active fire systems observed within the building were:

- Automatic smoke detection and alarm system
- Emergency lighting and exit signage
- Emergency evacuation plans
- Fire hydrant system
- Fire hose reel system
- Portable fire extinguishers

1.0 PRELIMINARIES

1.1 Building Assessment Data:

Part of Project	Building
Classification	5, 8
Number of Storeys	1
Rise In Storeys	n/a
Type of Construction	C
Effective Height (m)	3m

Part of Project	Building
BCA Classification	5 (Administration, Offices) 8 (Warehouse)
Number of Storeys	1
Rise In Storeys	n/a
Type of Construction	C
Effective Height (m)	n/a
Applicable BCA*	Building Code of Australia 2016 – Volume 1 (Amendment 1)

2.0 Assessment

The below table highlights key areas identified on site where building elements are not compliant with the requirements of the current BCA and referenced standards.

No.	Items for review	Recommendation/Action
	Main Office Building	
1.	Stairs located within office space connecting office to breakout space has the bellow non-compliances: ▪ No tactiles present. ▪ No Handrails present	
2.	Ramp located within office space connecting office to breakout space has the bellow non-compliances: ▪ Gradient is not to standard and requires to be 1:14 ▪ Continuous handrails are required on both sides ▪ Non-compliant landing and circulation space	
3.	Accessible facility is non-compliant. The follow are the non-compliances: ▪ Door 770mm clear width ▪ Current Room size 1616 x 2282mm in lieu of 1900 x 2300mm in accordance with AS1428.1-2009 ▪ Hand towel at a height of 1250 in lieu of 900 – 1100mm ▪ Mirror is non-compliant ▪ Washbasin non-compliant circulation	
4.	Based off the amenities provided within the main building the following occupant numbers can be achieved: Male: 60 Female: 60	

5. Exit doors contains step ramp that is too steep. Step ramp must be 1 in 10.
External door is not DDA compliant due the containing a step without handrails and tactiles

6. All doors within office are 770mm clear in lieu of 900mm.

7. Non-compliant latchside clearance to door that connects office space to reception.

8. All full height glazing must have decals compliant with AS1428.1-2009

9. There is no mechanical ventilation present in office space

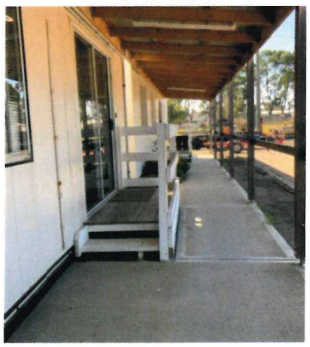
10. There are commercial fire extinguishers that are located at a non-compliant height.

11. Building has no FIP present

Door leading from break out space to main office has non-compliant door latchside clearance

	Portable Buildings	

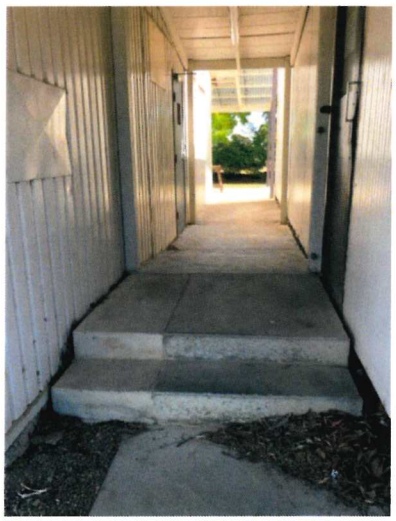
12. Steps to front entrance of portables contains stairs with non compliant handrails and tactiles and non-consistence going and risers.



13. Door connecting portables does not have compliant latchside clearance

14. Door connecting portables contains a step and is not accessible

Non compliant stairs between main office building and portables. Non-complaint handrails, no tactiles and inconsistent risers.



15. It appears that there is no fire separation between the main office building and the portables. These buildings are connected by the same roof.

    Floor areas to be confirmed as main building and portables as this can be considered on fire compartment and therefore fire separation is not required.

	General Site	

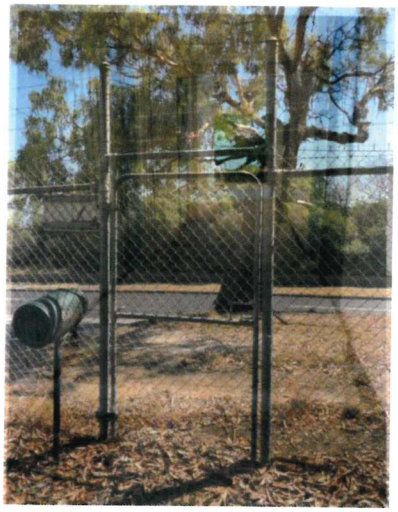
16. Hydrant coverage for site may not be achieved. Further review of site plans will be required to determine if existing hydrants achieve full coverage.

    It was noted that there was 3 external fire hydrants.

17. Vehicular access to the site outside of hours is not available once front gates are locked. Vehicle gate is not fitted with a fail safe device.

18. Pedestrian access outside of the site is achieved through a non-compliant swing gate.

This gate swings against the direction of egress in towards the building.



Main entrance to building has a non-compliant accessible entry. The entrance contains stairs and no ramp of DDA access. Stairs do not have handrails, tactiles or noisings.

3.0 Structural Provisions:

Live load capacity of existing structure to be confirmed by structural engineered relevant to the proposed office use.

Any new structural works are to comply with the applicable requirements of AS/NZS 1170.1.

Building Importance is Level 2.

Any new extension (less than 50% of the building) or addition are require to comply with the current codes.

Any extensions that is greater than 50% (volume/ area) of the existing building, the entire existing building and new extensions are required to comply with the current codes.

4.0 FIRE PROTECTION

4.1 Fire Compartment Arrangements:

Based upon the rise in storeys and existing fire compartment size the building is required to be of Type C Construction.

4.2 Fire Resistance:

The building is to be constructed generally in accordance with the relevant provisions of Specification C1.1 of the BCA applicable to Type C Construction. FRL of the existing structure is to be investigated and confirmed as per the below –

Item	BCA DTS provisions
Common walls	90/90/90
External walls: - Less than 1.5m from fire source feature. - Between 1.5m to 3m from fire source feature	90/90/90 60/60/60

4.3 Fire Hazard Properties:

The fire hazard properties of fixed surface linings and mechanical ductwork will also need to be addressed within the detailed documentation phase pursuant to specification C1.10 Building Code of Australia. Based on a visual inspection the following floor linings was present, however fire indices hazard could not be determine:

- Carpet
- Vinyl

5.0 ACCESS AND EGRESS

5.1 Egress:

Other detailing issues that will need to be identified & upgraded throughout include –

- Door Hardware:
  Exit door are require swing in the direction of egress, and door located in the path of a required exit, forming part of an exit or an exit door are to be openable without a key from the sided that faces a person seeking egress, by a single hand downward action on a single device which is located at 900mm-1.1m from the floor and comply with AS1428.1-2009.

- Stair Construction
  All public stairs are to comply with the BCA (riser 115mm-190mm and going 250mm-355mm) and AS1428.1-2009.

- Slip rating or stair nosings
  Slip rating are to comply with the below table:

Table D2.14 SLIP-RESISTANCE CLASSIFICATION

Application	Surface conditions	
	Dry	Wet
Ramp steeper than 1:14	P4 or R11	P5 or R12
Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11
Tread or landing surface	P3 or R10	P4 or R11
Nosing or landing edge strip	P3	P4

Stair nosing are to achieve min 30% luminance contrast and comply with AS1428.1-2009.

5.2 Exit Travel Distances:

BCA requires 2 exits, which the office buildings are provided.

The location of exits should not exceed 20m to a single exit or point of choice and where two exits are provided, a maximum of 40m to one of those exits.

5.3 Dimensions of Exits:

Exits require a minimum unobstructed width of 1000mm. Further details drawings and occupant numbers will need to be provided for a full exit width calculation.
All exit doors shall swing in the direction of egress.

Doorways solely used for egress purposes are permitted to contain a clear opening width of 850mm with a height of 1980mm as part of egress requirements.

5.4 Balustrading and Handrail:

Handrail and Balustrade construction. Handrails are to be located at 865mm-1m from stair nosing and 1m from the stair landing.

Balustrade shall be minimum 1m from the stair, and a max 125mm opening are not permitted, current stairs complies with this requirements.

Balustrades to be structurally designed to withstand impact loading to AS1170.1 requirements. Structural engineer is to investigate existing balustrades.

6.0 SERVICES AND EQUIPMENT

6.1 Fire Hydrants:

A system of Fire Hydrants is required to be provided to serve the building as per BCA Clause E1.3 & AS2419.1.

Fire Hydrant system is required to be upgraded as necessary to comply with current requirement (diameter of piping, booster location, hydrant locations, etc.). Where hydrant system cannot be upgraded to comply, variations will require the consent of the Chief Officer per Regulation 309.

6.2 Fire Hose Reels:

Fire hose reels shall be located within 4m of exits and provide coverage within the building based on a 36m hose length.

6.3 Fire extinguishers:

Fire extinguishers shall be provided throughout the building per BCA E1.6 and AS2444. Upgrade as necessary.

Fire extinguishers are to be located between 100mm to 1200mm AFFL.

6.4 Exit Signs and Emergency Lighting:

Emergency Lighting and Exit Signs indicating exit location paths of travel to exits to be provided in accordance with AS2293.

Exit Signage & Emergency lighting to be upgraded throughout to depict "Running Man" graphic.

Emergency lighting details are to be provided for our review.

7.0 HEALTH AND AMENITY

Sanitary facilities are required to be provided for employees.

Based on the below provided fixtures, the max. population is – 30 female and 30 male occupants

TOILETS	W/C	URINAL	W/B
Male	4	3	1
Female	1	-	2
DDA	1	-	1

Where bathrooms or rooms containing water closets have the WC within 1200mm of the doorway, the door shall be either sliding, open outwards, or be provided with removable hinges.

All wet areas must be waterproofed to AS3740.

Upgrade the existing DDA facilities are required, as the current facility does not comply with AS1428.1-2009.

7.1 Floor Wastes:

Floor wastes are required to be provided where wall hung urinals are provided and the floor shall be graded towards these wastes.

7.2 Light and Ventilation:

Natural Ventilation is required to be provided to rooms at a rate of 5% of the floor area in openings. However a source of mechanical ventilation could be used as an alternate for the provision of Fresh Air quantities.

Artificial lighting complying with AS/NZS1680.0 is to be incorporated with the final detailed design to be developed to confirm this.

Mechanical Ventilation and artificial light is to be provided in accordance with Part F4 of the BCA.

8.0 ENERGY EFFICIENCY

8.1 Energy Efficiency:

The proposed site will be located in Climate Zone 6.

A Class 5 (office) building must achieve compliance –

Options available are:

- Comply with either JV3

Or

- Comply with the deemed to satisfy provisions in relation to –

  Part J1 – Building Fabric (subject to alternative solution),
  Part J2 – External Glazing (subject to alternative solution),
  Part J3 – Building Sealing,
  Part J5 – Air Conditioning and Ventilation Systems,
  Part J6 – Artificial Light and Power.

Certification from an appropriately qualified engineer should be provided for either option with a report / computations outlining how compliance is achieved.

9.0 DDA ACCESSIBILITY

The following requirements within the BCA 2015, the premises standards, the 1428.1 – 2009 version & 1428.4 – 2009 version.

9.1 Applicability:

The following is required to be provided with disabled accessible space;

Office

To and within all areas normally used by the occupants.

9.2 Access to buildings:

Access must be provided to a site from;

1. The main points of pedestrian entry at the allotment boundary
2. From another building (required to be accessible) linked by a pedestrian link
3. From any accessible car parking spaces

And to the actual building, access must be provided via the main principal entrance and;

1. Not less than 50% of all pedestrian entries (including the principal entrance) and
2. In buildings over 500m^2 in floor area, a non-accessible entrance must not be located more than 50m from an accessible entrance.

A door is considered to be accessible if it is automatic (open and closing) or is more than 850mm in clear opening width and contains the required door circulation space.

The front entry and associated ramps and landings is required to be upgraded on to comply with AS1428.1-2009 including door circulation.

Any variations within this section may be considered to be subject to the assessment of a DDA consultant.

9.3 Accessibility within Building:

A building required to be accessible is required to be equipped with a 1428.1 compliant lift.

Within the building the following are required;

- Door circulation space as per AS1428.1 Clause 13.3;
- Doorways must have a clear opening of 850mm;
- Passing spaces (1.8m wide passages) must be provided at maximum of 20m intervals
- Within 2.0m of end access ways/corridors, turning areas spaces are required to be provided.

It is noted that building B is level 1 is not provided with a lift, and therefore DDA access to the first floor office is not provided.

9.4 Tactile indicators:

Tactile indicators are required to be provided to warn occupants of all stairs (except Fire Isolated stairs) and ramps regardless of public nature or private environment and where an overhead obstruction occurs less than 2.0m above the finished floor level.

9.5 Accessible sanitary facilities:

An accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only and provided in accordance with 1428.1 and must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary towels and as per following.

Building Type	Minimum accessible unisex sanitary compartments to be provided
Office	a) 1 on every storey containing sanitary compartments; and b) Where a storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of banks.

At each bank of toilets where there is one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females; and

Where male sanitary facilities are provided at a separate location to female sanitary facilities, accessible unisex sanitary facilities are only required at one of those locations.

An accessible unisex sanitary compartment or an accessible unisex shower need not be provided on a storey or level that is not provided with a passenger lift or ramp complying with AS1428.1.

9.6 Signage

- Sanitary Facility Identification Signs) note that they are to comply with BCA Specification D3.6 and include the use of Braille, Tactile, etc and be placed on the wall on the latch side of the facility);
- "Disabled" sanitary facility sign in accordance with the universal standard (as detailed in AS1428.1);
- Exit braille signage to be provided adjacent the fire stairs doors on level 1.
- Directional / Way Finding signs to the Lifts, Sanitary Facilities, etc.